

# KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(4 Pages)

Reg. No:.....

Question Code: 26E01523

Course Code: 25USMB22

UG Degree - End Semester Examinations, April 2026

Second Semester  
B.Sc., MICROBIOLOGY

Sericulture

(For those who joined in June 2025 onwards)

Time : 3Hours

Maximum : 75 Marks

## PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1  
K:1
1. Identify the species most widely cultivated for mulberry leaf production in sericulture.
- (a) *Morus indica* (b) *Morus alba*  
(c) *Morus nigra* (d) *Morus rubra*
- CO:1  
K:2
2. Select the factor that is directly influenced by mulberry leaf quality.
- (a) Cocoon colour (b) Silkworm filament length  
(c) Silkworm feeding (d) Moth wing span
- CO:2  
K:1
3. Recognize the domesticated mulberry silkworm species used in commercial sericulture.
- (a) *Antheraea assamensis* (b) *Bombyx mori*  
(c) *Samia ricini* (d) *Attacus atlas*
- CO:2  
K:2
4. Choose the correct sequence representing the silkworm life cycle.
- (a) Egg → Larva → Pupa → Moth (b) Egg → Pupa → Larva → Moth  
(c) Larva → Egg → Pupa → Moth (d) Egg → Larva → Moth → Pupa
- CO:3  
K:1
5. Identify the causative agent of *Pebrine* disease.
- (a) Virus (b) Bacterium  
(c) Fungus (d) Microsporidian

- CO:3 6. Recognize the pathogen responsible for Muscardine disease in  
K:2 silkworms.
- (a) *Nosema bombycis* (b) *Beauveria bassiana*  
(c) *Bacillus thuringiensis* (d) Nucleopolyhedrovirus
- CO:4 7. Select the term used for unwinding silk filament from the cocoon.  
K:1
- (a) Spinning (b) Reeling  
(c) Carding (d) Weaving
- CO:4 8. Identify the correct expression for shell ratio in cocoon  
K:2 evaluation.
- (a) Cocoon weight / Shell weight (b) Shell weight / Cocoon weight  
(c) Larval weight / Cocoon weight (d) Filament length / Shell weight
- CO:5 9. Expand the abbreviation EDP in sericulture development  
K:1 programmes
- (a) Economic Development Policy (b) Entrepreneur Development Programme  
(c) Environmental Development Process (d) Enterprise Data Plan
- CO:5 10. Identify a non-mulberry silk variety.  
K:1
- (a) Mulberry (b) Nylon  
(c) Muga (d) Rayon

**PART - B (5 X 5 = 25 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 250 words.**

- CO:1 11. (a) Explain the importance and distribution of sericulture in  
K:5 India.

**(OR)**

- (b) Describe the botanical characteristics of mulberry that influence leaf yield and quality.

- CO:2 12. (a) Apply your understanding to describe the morphology of  
K:3 silkworm larva in relation to its feeding habits.

**(OR)**

- (b) Describe the life cycle of silkworm and relate each stage to its economic significance.

CO:3 13. (a) Examine the symptoms, causative agent and control  
K:4 measures of Pebrine disease.

**(OR)**

(b) Differentiate Flacherie and Grasserie diseases based on causative factors and symptoms.

CO:4 14. (a) List the steps involved in silkworm rearing.

K:3

**(OR)**

(b) Explain cocoon processing methods and their impact on silk quality.

CO:5 15. (a) Analyse the requirements for establishing a small sericulture  
K:4 enterprise.

**(OR)**

(b) Compare different types of Indian silks in terms of characteristics and commercial value.

**PART - C (5 X 8 = 40 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 500 words.**

CO:1 16. (a) Analyze the historical development and evaluate the present  
K:4 status of sericulture in India.

**(OR)**

(b) Sequence the mulberry cultivation practices and justify their impact on leaf quality and silk production.

CO:2 17. (a) Discuss in detail the anatomy and physiology of silkworm  
K:6 larva and interpret their functional significance.

**(OR)**

(b) Analyze the complete life cycle of silkworm and design appropriate management practices at each stage.

CO:3 18. (a) Evaluate Pebrine and Muscardine diseases and propose  
K:5 preventive strategies.

**(OR)**

(b) Analyze bacterial and viral diseases affecting silkworms and recommend suitable control strategies.

CO:4 19. (a) Recommend rearing techniques and environmental  
K:5 management principles to enhance cocoon yield.

**(OR)**

(b) Examine cocoon grading and reeling techniques and assess their influence on silk quality parameters.

CO:5 20. (a) Design a comprehensive project report for establishing a  
K:6 sericulture unit.

**(OR)**

(b) Discuss the scope of the Indian silk industry and propose value-added silk products for market expansion.